EDITORIAL

It was the worst of times, it was the best of times: positive trends influencing hospital libraries*

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There is a certain irony to libraries in hospitals being closed at a time when the value and impact of evidence-based information for patient care is increasingly being recognized [1, 2]. Between 1989 and 2006, it is estimated that between 36% and 44% of hospital libraries closed [3]. The closures may have resulted from the dilution of relevant hospital library standards by the Joint Commission for the Accreditation of Healthcare Organizations. As an example, the 1999 accreditation manual included three ''Knowledge-based information'' (KBI) standards [4]. The first required that hospitals provide ''systems, resources and services to meet KBI needs in patient care, education, research and management.'' The intent section elaborated that this could be met by an on-site library, a qualified medical librarian, or a cooperative arrangement for their provision. By 2009, all that remained was one standard requiring access to KBI. Without the provision for a library or librarian, any ''current and authoritative'' website could suffice [5]. The dilution of Joint Commission standards appears to sanction reducing the level of knowledge required in hospitals. There is not enough evidence to establish a causal relationship between the revised standards and the closure of hospital libraries, but the trends coincide. Pressures that diminish the availability of information conflict with the rising absolute need for more knowledge.

Consider this: In the course of any single day, approximately 95,616 patients are hospitalized in the United States [6]. Insurance providers record the number of tests, surgery, and drugs administered to these patients, but no one measures the level of knowledge brought to their care. The need for information to support patient care has been documented: Research shows that 2 questions arise for every 3 patients in office practice [7] and an average of 5 questions arise per patient encounter in academic medical settings [8]. These questions may go unanswered. Studies report that physicians pursue answers to only 36%–55% of questions raised about patients' care [9, 10]. Unanswered questions, or even unasked questions, may lead to poorer medical care. The Institute of Medicine estimates that as many as 98,000 Americans die each year from preventable medical errors [11]. With 95,616 patients in the hospital any given day, an average of 5 questions per patient encounter in academic settings, and at most only 55% of these questions being pursued, that leaves at least 215,136 questions a day going unanswered. No wonder health care errors have become a national crisis and remain at an unacceptable level [12]. In the face of rising errors and accumulating knowledge, finding time to sort through the literature to find answers to specific patient questions is crucial to quality patient care. Clinicians are hard pressed to find the time to answer these care questions. Yet the one staff person whose job it is to answer them, the librarian, is no longer a requirement.

Evidence-based medicine is not without controversy: Ill-advised advocates for ''evidence-free,'' also known as ''logical,'' medicine have surfaced. Proponents of evidence-free medicine say it allows the ''incorporation of a variety of facts and warrants, reasons and reasoning, into clinical decisions. Forgoing evidence allows clinical medicine to once again be a personal and prudential undertaking, arising from and focused on the individual patient'' [13]. Evidence-free medicine may be a reaction to the evidence-challenged environment of hospitals deregulated from having access to a librarian or library. It is wise not to need what you do not have. Without the assistance of a qualified librarian and support for a collection, there is no one to call for searches and no journal subscriptions if an article is needed. The conflict between weakening information requirements on the one hand and increasing need for information resources on the other may result in diminishing availability of quality care. Who would really want to be treated at a hospital lacking an information base?

Reactions to the eroding knowledge core are mounting. The following developments illustrate the pressures for change and the opportunities they create for librarians:

- President Obama's emphasis on comparative effectiveness research may encourage medicine to use what works for patient populations on a large scale. Practitioners need the literature base to determine what is effective and where exceptions exist and, at some point, to enable payment for genetic variations or innovations. The electronic health record (EHR) can effectively distribute such practice guidelines, and librarians are already actively involved in integrating practice guidelines with KBI resources [14, 15]. Deepening their involvement with the EHR, librarians are using their classification and electronic record knowledge to inventory physician order sets and develop record databases [16]. Beyond installation, librarians stay on to educate staff in information retrieval, as training is a long-standing function for librarians.
- ''Magnet'' hospitals are associated with nursing excellence because their environment of care fosters a quality focus. Magnet hospital status, a designation of the American Nurses Credentialing Center, pushes for anchoring

* Adapted from Dickens C. A tale of two cities. New York, NY: Modern Library; 1996.

hospital, even unit-based, polices to the literature. ''Creating, advancing, and sustaining a practice environment grounded in evidence-based practice and nursing research is essential to achieving Magnet status'' [17]. Literature's importance in this setting is demonstrated by a recent survey of Magnet-certified institutions, which has found that 94% have access to a medical or nursing library in the medical center complex and another 4% have library privileges although outside the center [18]. Nurses are pivotal in quality care, being unit-based first responders and care providers. As they strive for excellence, they enhance the focus on information resources. Why not work at a hospital that uses what works? This integration of evidence into the Magnet Program facilitates librarian involvement and library use [19].

■ The movement to tie better results into better reimbursement is already underway in the form of Medicare's Pay for Performance initiatives. Perhaps the existing unsatisfactory hospital performance relates to the elimination of the library as a requirement for Medicare reimbursement in 1984 [20]. Hospitals need information resources to determine effective techniques and best practices in order to achieve better results. The conflict noted above is evident here: The requirement for information resources falls, while the need for information usage grows. Pay for Performance may require access to the literature, for example, when the hospital committee charged with developing a protocol for urinary catheter removal calls the librarian for a search. When the question becomes, ''When is the best time for catheter removal?,'' those institutions with a library can find an answer supported by data.

■ New preferred reporting items for systematic reviews and meta-analyses (PRISMA) guidelines for systematic reviews require writers to describe their ''search methodology'' along with their research methodology and to identify ''who designed and conducted the literature search'' [21]. This statement emphasizes the importance of the information scientist and supports the premise that correctly synthesizing the literatures requires first retrieving the entire relevant literature base. PRISMA standards have been simultaneously published by four journals and are fast replacing earlier efforts to offer standards for systematic review information retrieval. The recognition of the importance of the literature retrieval process may be a reaction to the loss of life, possibly due to poor literature searching [22]. If accepted at a national level, the need for a search could be included in mandatory care guidelines for reimbursement. Given that systematic reviews are beginning to define best practice, librarians are well positioned to play a central role in the development of practice guidelines.

■ Broadened accessibility of ''detailing'' services like systematic review assistance, search protocol projects, and librarian attendance at morning report reflect the increasing value given to ''expert searching.'' A recent US survey has found the percentage of clinical librarians (CLs) increasing, with approximately 200 CLs in 2005/06 [3]. CLs possess the sophisticated knowledge needed to integrate diagnosis, drug, and disease variables. As an example, they can find literature on how therapy for psychosis changes in an immune-suppressed transplant patient on multiple drugs, with an underlying inherited disease. Support for the importance of the CL role is provided by a 2008 report commissioned by the British National Health Service (NHS) to review library and knowledge services in England. The report recommended an increase in the number of clinical librarians from 50 to 800 [23]. The British NHS report advocates for CLs as part of their effort to ''make the best use of its resources to provide high quality, equitable care for patients'' [23]. CLs help find effective interventions in the literature and bridge the gap between article and bedside. With the Oxford-founded Cochrane Collaboration demonstrating the impact of systematic reviews to determine efficacy, the international emphasis on using literature to advance care is flourishing.

Increasingly, the ''science'' in ''library science'' itself is growing. The *Evidence-based Library and Information Practice* journal attests to the growing amount of science supporting information practice [24]. As librarians, we must advance and embrace the structure underlying good information retrieval and audit trails documenting a quality search. Accountability for the results only increases the value of the search and searcher.

Hopefully, someday institutions will score their ''information readiness'' in order to quantify the information resources available for the care of individual patients. The information readiness score might be akin to designations like the ''most-wired'' status for hospitals [25] or hierarchy levels for trauma centers [26]. The availability of search design assistance or search performance by a qualified information professional, timeliness of article delivery, currency and depth of the literature collection, number of hours of onsite access, and number of licensed databases might factor into the level of information readiness. Hospital staff may note in the EHR the level of evidence used in decision making and the consultant who conducted the search. Institutions may come to boast about the level of knowledge available for patient care, while the time to diffusion and use of knowledge at the bedside may shorten.

Many are quick to tout the broad-based searching of Google as the answer to ''searching'' in medicine. Searching and finding are two different things. Science has determined that multiple databases need to be searched for adequate coverage [27] and that Google Scholar lags behind academic databases for timeliness [28]. When it comes to searching versus finding, librarians have a privileged position [29]. The librar-

ian has the combination of time, technique, and training, plus the expertise, to find the needed information. There is a subtle shift in the literature to valuing who is the searcher, paying attention to what they are searching, and determining the level of evidence of the retrieval. An article in the journal *Chest* recommends that ''a professional information specialist should be engaged'' before claiming ''the literature shows that…'' [30]. In time, hospitals may return to the notion that the librarian is an expert consultant who can provide evidence, maximizes the electronic database, and is an essential component in quality care. These hospitals' patients would not be the first people to owe their lives to a librarian [31].

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Michele Klein-Fedyshin, BSN, MSLS, RN, AHIP, kleinf@pitt.edu, Western Psychiatric Institute & Clinic Liaison Librarian, Health Sciences Library System, University of Pittsburgh, 200 Scaife Hall, 3550 Terrace Street, Pittsburgh, PA 15261

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